

CLAIMS

1. Method for controlling data retransmission from  
a control unit over a connection established with a  
5 radio terminal,  
in which the control unit and the terminal exchange  
over the said connection, by means of at least one base  
station, first frames comprising data frames sent to  
the terminal and acknowledgement frames sent by the  
10 terminal and containing acknowledgement information in  
respect of the first data frames,  
in which the first frames are encapsulated, with  
corresponding timestamping information, in second  
frames for transmission between the control unit and  
15 each base station over an asynchronous interface,  
in which the timestamping information accompanying one  
of the data frames over the asynchronous interface  
indicates an instant of transmission of the said data  
frame by each base station with reference to a time  
20 counter specific to a radio section of the said  
connection,  
in which the timestamping information accompanying one  
of the acknowledgement frames over the asynchronous  
interface indicates an instant of reception of the said  
25 acknowledgement frame by each base station with  
reference to the said time counter,  
wherein it comprises the following steps:  
- the storage at the control unit of the  
timestamping information indicating an instant of  
30 transmission of a data frame; and  
- upon reception at the control unit of an  
acknowledgement frame accompanied by timestamping  
information indicating an instant of transmission  
and containing acknowledgement information  
35 interpreted as indicating non-reception of the  
said data frame by the terminal, the selective  
taking into account of the said acknowledgement  
information for controlling a retransmission of  
the said data frame, on the basis of a comparison

between the said instants of reception and transmission.

2. Method according to Claim 1, in which the selective taking into account of the said  
5 acknowledgement information comprises the alternatives of

- ignoring the said acknowledgement information if the said instant of reception is not later than the said instant of transmission by an amount  
10 exceeding a threshold; or
- taking into account the said acknowledgement information if the said instant of reception is later than the said instant of transmission by an amount exceeding the said threshold.

15 3. Method according to Claim 2, in which the said threshold is practically zero.

4. Method according to Claim 2, in which the said threshold is of the order of ten milliseconds.

20 5. Method according to Claim 2, in which the said threshold is variable.

6. Control unit comprising means for exchanging first frames with a radio terminal over a connection established with the said radio terminal, by means of at least one base station,

25 in which the first frames comprise data frames sent to the terminal and acknowledgement frames sent by the terminal and containing acknowledgement information in respect of the first data frames,

in which the first frames are encapsulated, with  
30 corresponding timestamping information, in second frames for transmission between the control unit and each base station over an asynchronous interface,

in which the timestamping information accompanying one of the data frames over the asynchronous interface  
35 indicates an instant of transmission of the said data frame by each base station with reference to a time counter specific to a radio section of the said connection,

in which the timestamping information accompanying one

of the acknowledgement frames over the asynchronous interface indicates an instant of reception of the said acknowledgement frame by each base station with reference to the said time counter,

5 wherein it additionally comprises:

- means for storing the timestamping information indicating an instant of transmission of a data frame; and
- means by which, upon reception at the control unit  
10 of an acknowledgement frame accompanied by timestamping information indicating an instant of transmission and containing acknowledgement information interpreted as indicating non-reception of the said data frame by the terminal,  
15 the said acknowledgement information for controlling retransmission of the said data frame is selectively taken into account, on the basis of a comparison between the said instants of reception and transmission.

20 7. Control unit according to Claim 6, in which the means of selectively taking into account the said acknowledgement information are arranged

- to ignore the said acknowledgement information if the said instant of reception is not later than  
25 the said instant of transmission by an amount exceeding a threshold; and
- to take into account the said acknowledgement information if the said instant of reception is later than the said instant of transmission by an  
30 amount exceeding the said threshold.

8. Control unit according to Claim 7, in which the said threshold is practically zero.

9. Control unit according to Claim 7, in which the said threshold is of the order of ten milliseconds.

35 10. Control unit according to Claim 7, in which the said threshold is variable.